The Wisconsin Collaborative
COLLABORATION
Diabetes Quality Improvement Project
2005

Members represent over 90 diverse partners, including:

- health care and professional organizations, minority groups, public health, business coalitions, insurance and managed care organizations, voluntary and community-based organizations, academic centers, industry representatives, and consumers.

Wisconsin Essential Diabetes Mellitus Care Guidelines, 2004 (one page)

The recommendations in these Essential Diabetes Mellitus Care Guidelines are intended to serve as a guide for clinicians and others involved in the implementation of care and preventive services for people with diabetes. They are not intended to replace or preclude clinical judgement. Abnormal physical or lab findings should result in follow-up/intervention.

For particular details and references for each specific area, please refer to the supporting documents and implementation tools in the full-text guideline available via the Internet at http://dhfs.wisconsin.gov/health/diabetes/DBMCGuidelns.htm or telephone: (608) 261-6871.

Concerns	Care/Test	Frequency
General Recommendations/ Care	♦ Perform diabetes-focused visit	*Type 1**: Every 3 months *Type 2**: Every 3 – 6 months * consider more often if A1c ≥ 7.0% and/or complications exist
	♦ Review management plan, assess problems and goals	Each focused visit; revise as needed
	♦ Assess physical activity	Each focused visit
	♦ Assess nutrition/weight/BMI/growth	Each focused visit
Self-Management Education	♦ Refer to diabetes educator, preferably a certified diabetes educator (CDE); curriculum to include the ten key areas of the national standards for diabetes self-management education	At diagnosis, then every 6 – 12 months, or more as needed
Medical Nutrition Therapy	♦ Refer to registered dietician, preferably a CDE; to include areas defined by the American Dietetic Association's Nutrition Practice Guidelines	*Type 1*: At diagnosis; then, if age < 18, every 3 – 6 months; if age ≥ 18, every 6 – 12 months. *Type 2*: At diagnosis; then every 6 – 12 months or more as needed
Glycemic Control	♦ Check A1c **(see Algorithm 1)** Goal: < 7.0% or ≤ 1% above lab norms	*Type 1*: Every 3 months *Type 2*: Every 3 – 6 months
	♦ Review goals, meds, side effects, and frequency of hypoglycemia	Each focused visit
	♦ Assess self-blood glucose monitoring schedule	Each focused visit, 2 – 4 times/day, or as recommended
Cardiovascular Care	♦ Check lipid profile Adult goals: Total Cholesterol < 200 mg/dL Triglycerides < 150 mg/dL HDL ≥ 40 mg/dL (men) HDL ≥ 50 mg/dL (women) Non-HDL (Cholesterol) < 130 mg/dL LDL < 100 mg/dL (optimal goal) LDL < 70 mg/dL (for **very** high risk)	*Children*: If > 2 years, after diagnosis and once glycemic control is established. Repeat annually if abnormal. Follow National Cholesterol Education Program (NCEP III) guidelines. *Adults*: Annually. If abnormal, follow NCEP III guidelines.
	♦ Blood pressure Adult goal: < 130/80 mmHg Pediatric goal: below 90% of ideal for age	Each focused visit
	♦ Assess smoking status	Each visit; if smoker, counsel to stop; refer to cessation
	♦ Start aspirin prophylaxis (unless contraindicated)	Age > 40 with diabetes; Age ≤ 40, individualize based on risk
Kidney Care	♦ Check albumin/creatinine ratio using a random urine sample, also called urine microalbumin/creatinine ratio **(see Algorithm 2)**	*Type 1*: Begin with puberty or after 5 years duration, then annually *Type 2*: At diagnosis, then annually
	♦ Check serum creatinine	At diagnosis, then annually
	♦ Perform routine urinalysis	At diagnosis, then as indicated
Eye Care	♦ Perform dilated eye exam by an ophthalmologist or optometrist	*Type 1*: If age ≥ 10, within 3 – 5 years of onset, then annually *Type 2*: At diagnosis, then annually; two exceptions exist (see Section 7)
Foot Care	♦ Inspect feet, with shoes and socks off	Each focused visit; stress need for daily self-exam
	♦ Perform comprehensive lower extremity exam	Annually, with monofilament
Oral Care	♦ Perform oral health screening	At diagnosis, then each focused visit
	♦ Advise dental exam by general dentist or periodontal specialist	At diagnosis, then every 6 months (if dentate) and every 12 months (if edentate)
Emotional/Sexual Health Care	♦ Assess emotional health; screen for depression	Each focused visit
	♦ Assess sexual health concerns	Each focused visit
Immunizations	♦ Provide influenza vaccine	Annually, if age ≥ 6 months
	♦ Provide pneumococcal vaccine	Once; then per Advisory Committee on Immunization Practices
Preconception and Pregnancy Care	♦ Provide preconception counseling/assessment	3 – 4 months prior to conception*
	♦ Assess contraception/discuss family planning	At diagnosis and each focused visit*
	♦ Screen for gestational diabetes	At 24 – 28 weeks gestation or sooner if high risk* * consider referring to provider experienced in care of diabetic women during pregnancy
Screening for Pre-diabetes and Diabetes	♦ Perform fasting plasma glucose test or oral glucose tolerance test **(see Algorithm 6)**	Test all people ≥ age 45; if normal and person has no risk factors, retest in 3 years

Diabetes Advisory Group, 2004

Mission

The Wisconsin Department of Health and Family Services, Diabetes Prevention and Control Program (DPCP) is dedicated to improving the health of people at risk for or with diabetes.

Forming and maintaining strong, active partnerships are key to achieving this mission.

The DPCP uses a statewide approach to improve the health of people at risk for or with diabetes by:

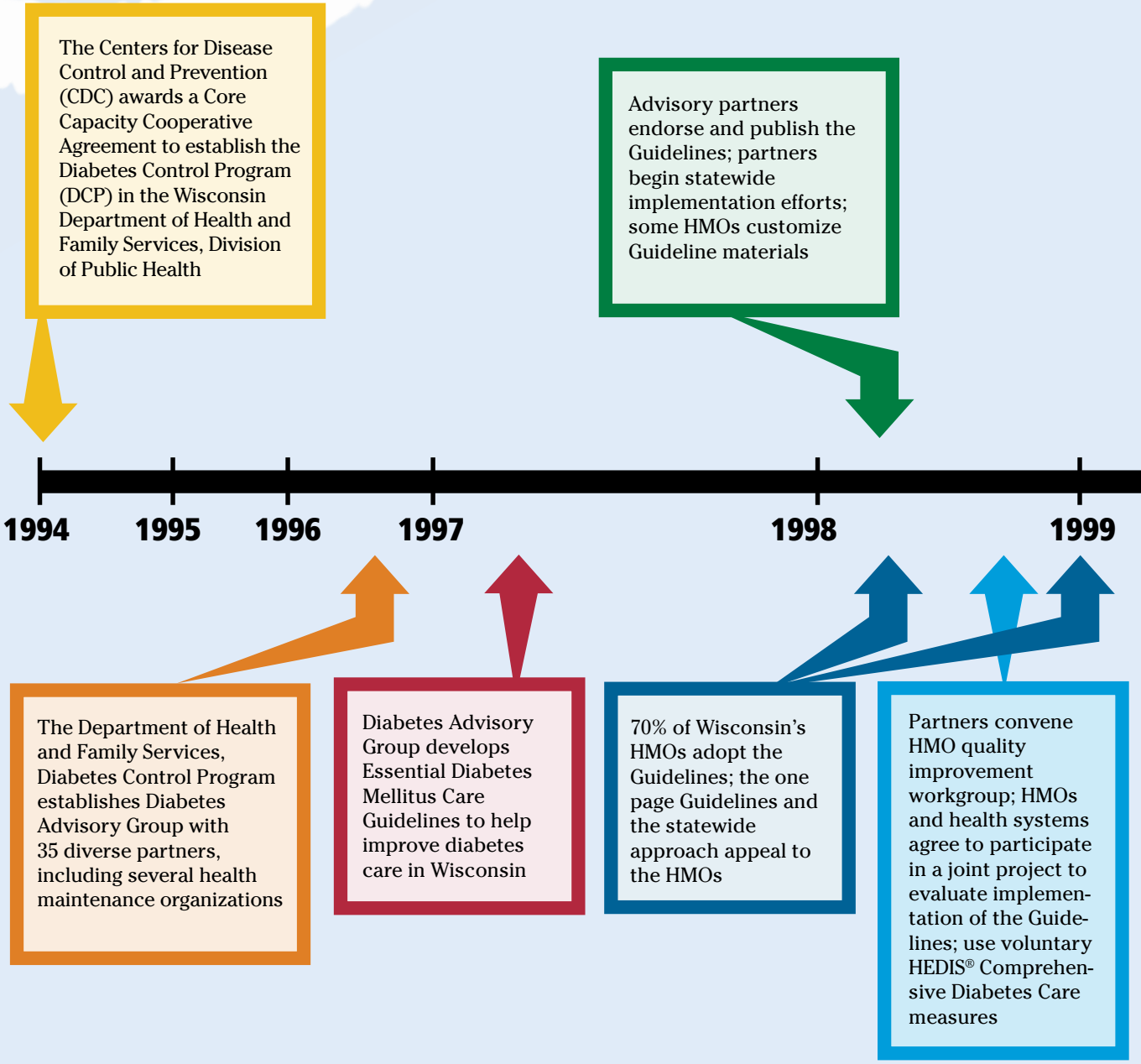
- Working with health systems
- Designing population-based community interventions and health communications
- Outreach to high risk populations
- Conducting surveillance and evaluation of the burden of diabetes
- Coordinating of efforts through the Wisconsin Diabetes Advisory Group

The Wisconsin Diabetes Advisory Group, convened by the Department of Health and Family Services, Diabetes Prevention and Control Program, provides the foundation for active partnerships across the state. Members include over 90 diverse partners, including health care and professional organizations, minority groups, business coalitions, insurance and managed care organizations, voluntary and community-based organizations, academic centers, industry and public health representatives and consumers.

The Wisconsin Collaborative Diabetes Quality Improvement Project is a joint partnership. Members include the DPCP, the University of Wisconsin Population Health Institute, MetaStar (Wisconsin's Quality Improvement Organization), the Department of Health and Family Services Division of Health Care Financing (Medicaid Program), health maintenance organizations (HMOs), and other health systems. The Wisconsin Collaborative Diabetes Quality Improvement Project was established as a forum to:

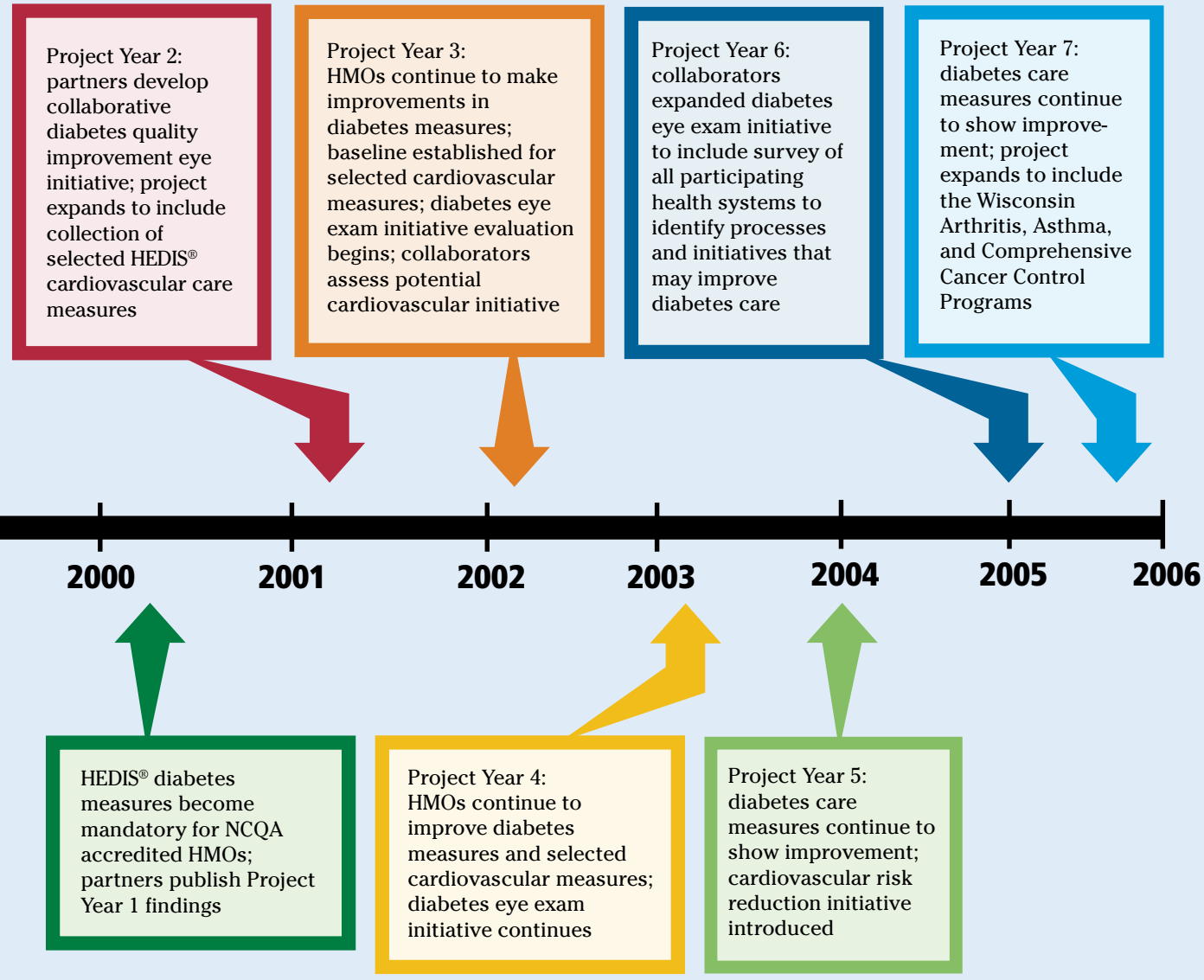
- Evaluate implementation of the Essential Diabetes Mellitus Care Guidelines
- Share resources, population-based strategies and best practices
- Improve diabetes care through collaborative quality improvement initiatives

Collaboration is Key



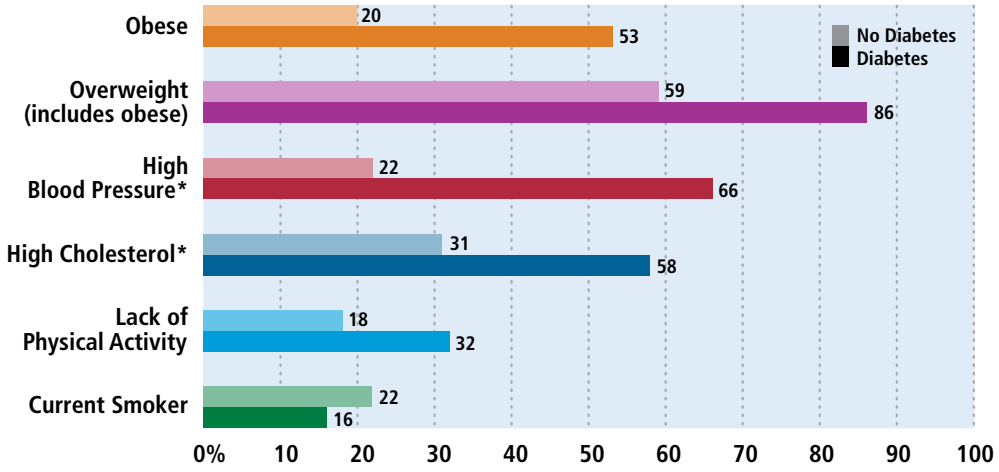
"Being a part of the HMO Diabetes Collaborative is a great experience. We all work together – sharing ideas, approaches, outcomes and barriers to tackle the tough health issues that face people with diabetes. Two of my favorite aspects of the work we do in the Collaborative are in-depth problem solving and assisting with the development of resource materials for patients and health care providers. I believe our efforts promote best practice in diabetes care across all regions of Wisconsin."

Quality Coordinator, Blue Cross Blue Shield of Wisconsin



Diabetes Facts and Figures

FIGURE 1: Percent of Wisconsin Adults with Risk Factors Related to Diabetes 2003-2004



Source: Wisconsin Behavioral Risk Factor Survey, 2003-2004
Overweight is defined as Body Mass Index (BMI) ≥ 25.0 kg/m^2, Obesity is defined as BMI ≥ 30.0 kg/m^2
* Data are from 2003

"Participating in the HMO Collaborative is the key to developing a common definition and to understanding key priorities. This forum for managed care organizations and other agencies throughout the State of Wisconsin reflects the commitment of all the various stakeholders. Above all we have a common goal to improve the health care processes and outcomes for people with diabetes."

Healthcare Quality Nurse, Unity Health Insurance

Serious: People with diabetes are at increased risk of numerous complications, including blindness, kidney disease, foot and leg amputations, and heart disease. Many adverse outcomes can be prevented by an aggressive program of early detection and appropriate treatment.

Common: Diabetes affects an estimated 329,000 adults and 4,000 children in Wisconsin. African American, American Indian, and older populations often have the highest rates of diabetes.

Costly: The cost of diabetes in Wisconsin is staggering. In 2002, estimated direct costs for diabetes were $3.17 billion and estimated indirect costs were $1.35 billion, totaling $4.52 billion. (Source: Wisconsin Diabetes Surveillance Report, 2005)

Controllable: The Diabetes Prevention Program (DPP) study results (August 2001) found that participants randomly assigned to intensive lifestyle intervention (30 minutes of physical activity a day and diet improvement) reduced their risk of developing type 2 diabetes by 58%. This is significant news and offers encouragement that reduction in risk factors with modest lifestyle changes may be the best way to prevent or delay type 2 diabetes.

Collaboration is Key

What is the Project?

The Wisconsin Collaborative Diabetes Quality Improvement Project

Goal: *to improve the quality of diabetes care in Wisconsin's HMOs*

Three Project Components

Evaluate implementation of the Essential Diabetes Mellitus Care Guidelines

- Collaborators selected the Health Plan Employer Data and Information Set (HEDIS®) Comprehensive Diabetes Care measures, developed by the National Committee for Quality Assurance (NCQA). Data offers unique opportunity to use the measures to assess Guideline implementation in Wisconsin.
- NCQA uses HEDIS® to accredit HMOs. The use of HEDIS® criteria provides standardized data collection at the population level to assess quality of care.
- The Department of Health and Family Services, Diabetes Prevention and Control Program contracts with the University of Wisconsin Population Health Institute for confidential analysis and reporting of HMO HEDIS® data.
- In 2003 the HMO collaborators represented over 99 percent of the over one million non-Medicaid and non-Medicare individuals currently enrolled in HMOs in Wisconsin, compared to 98 percent in 2001, 84 percent in 2000, and 68 percent in 1999.
- The Project expanded to collect select cardiovascular measures in 2000, select cancer screening measures in 2001, and select asthma care measures in 2004.

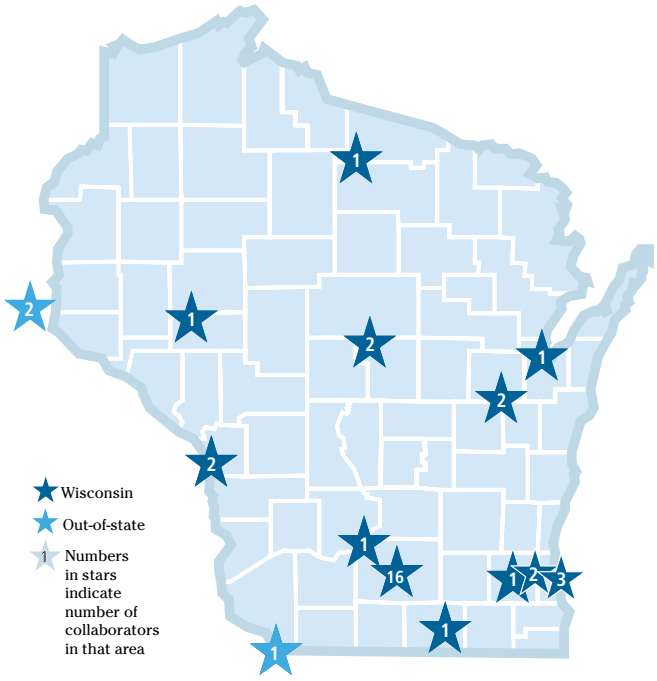


FIGURE 2: Locations of Project Collaborators, Including those Located Outside Wisconsin - 2005

Share resources, population-based strategies and best practices

- The Department of Health and Family Services, Diabetes Prevention and Control Program maintains a system for ongoing communication with the HMOs.
- Partners convene a quarterly forum for HMO quality managers.
- Collaborators discuss issues and strategies (e.g., registry development, data collection issues, provider profiles, quality improvement activities).

Improve diabetes care through collaborative quality improvement initiatives

- Collaborators developed their first statewide quality improvement initiative in 2001. The goals of the Diabetes Eye Care Initiative are to increase exams and improve reporting of results and recommendations.
- Collaborators use joint letterhead to provide united message.

Collaboration is Key
Results

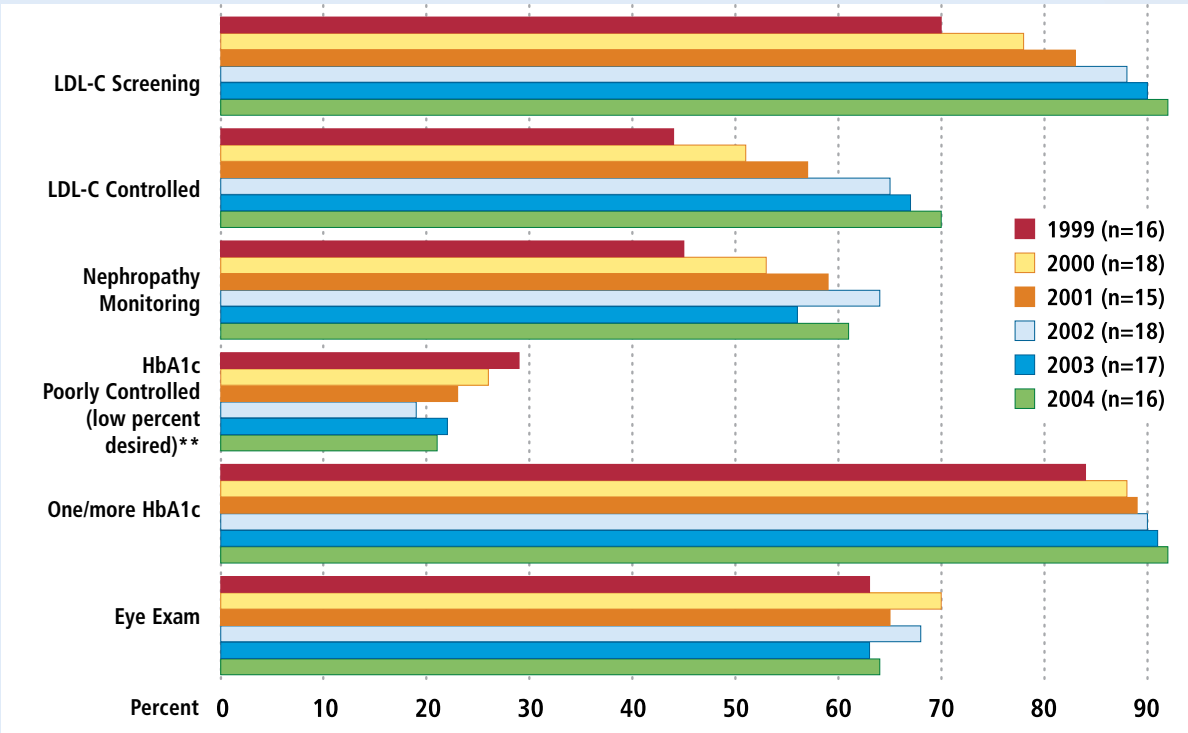
HEDIS® Comprehensive Diabetes Care Measures (for care provided in 1999-2004)

Diabetes measures have improved since the Project data collection began in 1999, as shown below. The figure and calculations reflect data submitted by all HMOs.

- LDL-C screening improved by 31% since 1999 (70% to 92%)
- LDL-C controlled (<130 mg/dL) improved by 59% since 1999 (44% to 70%)
- Nephropathy monitoring improved by 36% since 1999 (45% to 61%)
- Poorly controlled HbA1c† (>9.0%) improved by 28% since 1999 (a decrease from 29% to 21% demonstrates improvement)
- One/more HbA1c tests improved by 10% since 1999 (84% to 92%)
- Eye exams rates improved by 2% since 1999 (63% to 64%)

†The "HbA1c poorly controlled" measure changed from >9.5% to >9.0% in 2003.

FIGURE 3: Percent of Patients Receiving HEDIS® Comprehensive Diabetes Care Measures* (for care provided in 1999-2004)



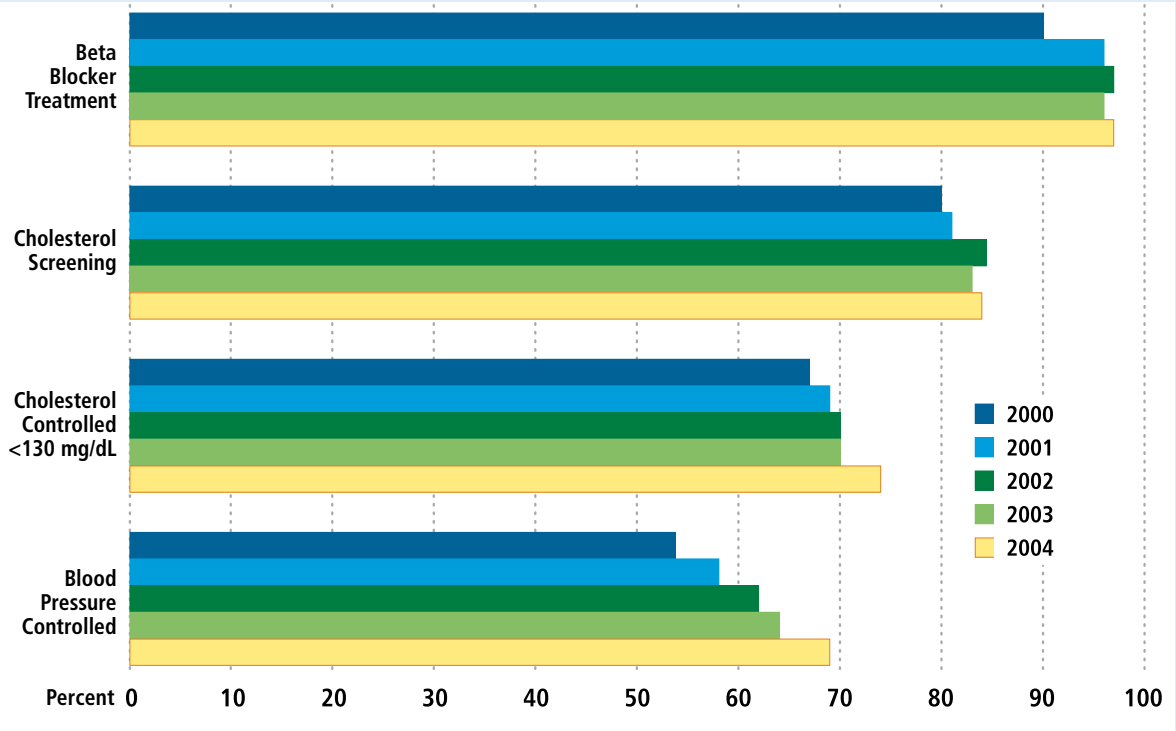
*For all HMOs that submitted data in each year. Similar trends exist for the 13 continously participating HMOs.
**The "HbA1c poorly controlled" measure changed from >9.5% to >9.0% in 2003.

Selected HEDIS® Cardiovascular-related Care Measures (for care provided in 2000-2004)

Results below show there is improvement in all of the cardiovascular-related measures since 2000. The figure and calculations reflect data submitted by all participating HMOs that submitted data with a denominator greater than or equal to 30.

- Beta-blocker treatment after heart attack improved by 8% since 2000 (90% to 97%)
- Cholesterol screening after acute CV event improved by 5% since 2000 (80% to 84%)
- Cholesterol controlled (<130 mg/dL) after acute CV event improved by 10% since 2000 (67% to 74%)
- High blood pressure control improved by 28% since 2000 (54% to 69%)

FIGURE 4: Percent of Patients Receiving Selected HEDIS® Cardiovascular-related Care Measures* (for care provided in 2000-2004)



*For all HMOs that submitted data with a denominator ≥ 30.

Collaboration is Key

How do we compare?

Comparison of Regional, National, and Project Populations Receiving Selected HEDIS® Measures (for care provided in 2004)

Measure	System with Highest Percentage	System with Lowest Percentage	Wisconsin Average of Systems	Regional Average‡	National Average♦
DIABETES					
LDL-C screening	97%	84%	92%	90%	91%
LDL-C control (<130 mg/dL)	82%	57%	70%	64%	65%
LDL-C control (<100 mg/dL)†	81%	33%	47%	41%	40%
Nephropathy monitored	79%	47%	61%	48%	52%
Poorly controlled HbA1c* (> 9.0%)	38%	12%	21%	29%	31%
One/More HbA1c	97%	83%	92%	87%	87%
Eye exam	88%	43%	64%	50%	51%
CARDIOVASCULAR**					
Control high blood pressure	78%	63%	69%	67%	67%
Beta-blocker treatment after heart attack	100%	95%	97%	96%	96%
Cholesterol management after acute CV event – LDL-C control (<130 mg/dL)	90%	58%	74%	67%	68%
Cholesterol management after acute CV event – LDL-C control (<100 mg/dL)†	80%	38%	57%	50%	51%
Cholesterol management after acute CV event – LDL-C screening	95%	77%	84%	81%	82%

†Two new measures were added for care provided in 2004
‡Regional data was provided by a collaborative partner
♦Source: The State of Health Care Quality 2005: Industry Trends and Analysis, National Committee for Quality Assurance
*Lower percentage desired
**Data includes all systems that submitted data with a denominator greater then or equal to 30
All measures were performed on enrollees ages 18-75 years old except the following: beta-blocker treatment after CV event (>35 yrs) control high blood pressure (46-85 yrs)

Project Advantages

- Diabetes and cardiovascular care measures continue to improve collectively in Wisconsin.
- Collaborators are using data reports to discuss barriers, problem-solve, and identify potential quality improvement initiatives.
- People with diabetes and cardiovascular disease in Wisconsin benefit from the improvements in care.
- HMOs receive local benchmarking data, reports to share with managers and community stakeholders, and a forum to address mutual concerns and best practices.
- The Diabetes Prevention and Control Program receives valuable data for surveillance and evaluation, as well as vital support toward their mission to improve the health of people at risk for or with diabetes.
- Communication and sharing forums help:
  - Distribute new research and resources
  - Promote dynamic brainstorming and planning
  - Coordinate sharing of quality improvement strategies
- Diabetes registries continue to be utilized by some HMOs.
- Wisconsin's diverse HMOs continue their willingness to collaborate with each other, community partners, and the state health department on quality improvement projects.
- Collaborators remain motivated and committed to the project's success.
- Ongoing collaboration is vital to continue these statewide improvements.

Collaboration is Key
Results

Variation in HEDIS® Comprehensive Diabetes Care Measures by Health Systems (for care provided in 1999 and 2004)

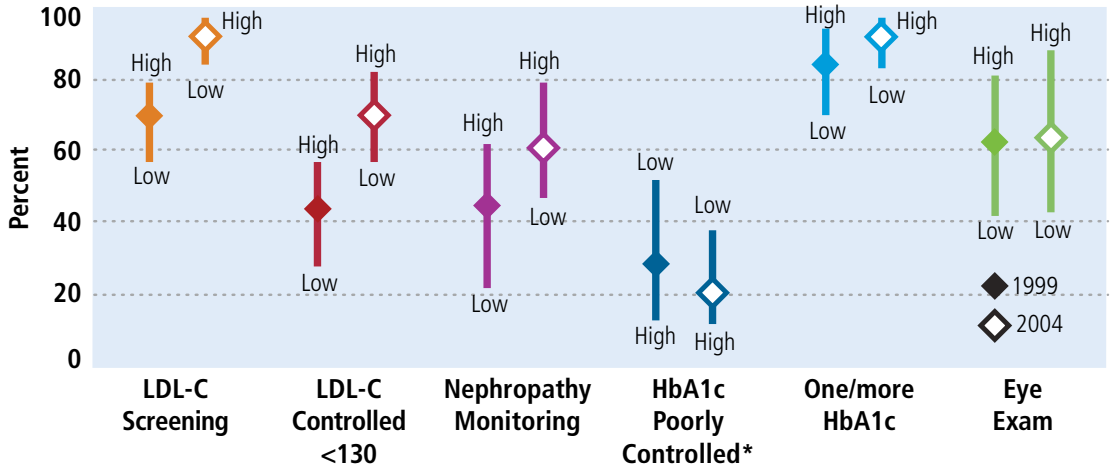
Examining variations in each of the Comprehensive Diabetes Care measures helps collaborators learn if quality of care is consistent across all systems, or if significant variation in performance is occurring. It also allows collaborators to continue sharing quality initiatives and lessons learned.

One way to evaluate variation among systems is to assess their average percentages over time. The mean and range (for each measure) were calculated for all plans that submitted data in 1999 and this information was compared to the range and mean (for each measure) in 2004. Figure 5 illustrates the range of variation for each Comprehensive Diabetes Care measure in 1999 and 2004, showing the highest and lowest performing plans.

The mean percent (all systems) is shown within the high-low range.

- The mean percentage for all of the Comprehensive Diabetes Care measures improved when comparing 1999 to 2004.
- Variation among the high and low plans decreased for all Comprehensive Diabetes Care measures from 1999 to 2004, except for the eye exam measure.
- The quality of diabetes care in 2004 was most consistent for HbA1c testing and LDL-C screening.
- Wide variations exist in some diabetes care measures in 2004. For example, one system had 88% of its enrollees with diabetes receiving eye exams, while another had 43%.

FIGURE 5: Range and Mean (◆) for HEDIS® Comprehensive Care Measures (all plans submitting data in 1999 and 2004)



* lower percentage desired

The Wisconsin Collaborative Diabetes Quality Improvement Project highlights an extraordinary level of cooperation among diverse, competitive health maintenance organizations to improve diabetes care in Wisconsin. Collaboration is key to this project's successes. This collaborative model may serve as the springboard for the expansion to other statewide quality improvement initiatives.

We would like to recognize the following organizations for their interest and participation in this project: Advanced Health Care, Atrium Health Plan, Inc., Blue Cross Blue Shield of Wisconsin, Dean Health Plan, Inc., Great Lakes Inter-Tribal Council, Inc., Group Health Cooperative of Eau Claire, Group Health Cooperative of Southcentral Wisconsin, Gundersen Lutheran Health Plan, Health Tradition Health Plan, Humana Inc, Managed Health Services, Medica Health Plan, Medical Associates, MercyCare Health Plans, Network Health Plan, Physicians Plus Insurance Corporation, Prevea Health Plan, Security Health Plan of Wisconsin, Thedacare, United Healthcare of Wisconsin, Inc., Unity Health Plans Insurance Corporation, and Valley Health Plan.

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The Wisconsin Collaborative Diabetes Quality Improvement Project
is an initiative of the Wisconsin Department of Health and Family Services,
Division of Public Health, Bureau of Community Health Promotion,
Diabetes Prevention and Control Program.

For questions or to obtain a comprehensive summary concerning this project contact:
Wisconsin Department of Health and Family Services
Division of Public Health
http://dhfs.wisconsin.gov/health/diabetes/

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